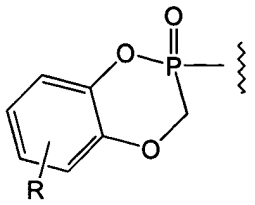
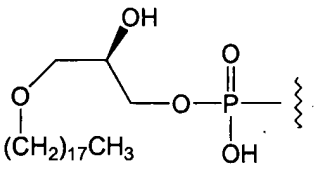
72. (Amended) A compound of claim 62, wherein R^7 is selected from the group consisting of:

C4

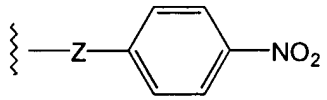


and



C5

85. (Amended) A method for screening for a therapeutic agent, comprising contacting a target cell with a compound of claim 62, wherein R^4 is:



A copy of the claims showing the changes to the specification and claims is attached as **"MARKED-UP VERSION SHOWING CHANGES MADE TO SPECIFICATION AND CLAIMS"**

II. REMARKS

Claims 56 to 89 are pending in the subject application and stand variously rejected by the Office in the outstanding Office Action. By this Amendment and Response, claims 58, 62, 63, 72 and 85. These amendments are made without prejudice or disclaimer and are not intended to be a dedication to the public the subject matter of the claims or their equivalents, as filed or as amended. Applicants reserve the right to pursue the claims as originally filed and amended in a later filed continuation application. No new matter has been added.

Support for the amendments to the claims can be found in the specification as originally filed. An issue of new matter is not raised by these amendments and entry thereof is respectfully requested.

In view of the preceding amendments and remarks that follow, reconsideration and withdrawal of the objections to the specification and the rejections of the claims are respectfully requested.

35 U.S.C. § 112, First Paragraph

Claim 56-61, 84 and 85-89 stands rejected under 35 U.S.C. § 112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Office argued that in claim 85, reference is made to assays using compounds which have been disclosed generically or subgenerically. This reference to compounds is excessively broad in light of the disclosure wherein only selected compounds have been tested.

With respect to claims 56-61, 81-84 and 86-89, the Office opined that reference is made to methods of treatment using compounds which have been disclosed generically or subgenerically. The Office argued that this reference to compounds is excessively broad in light of the disclosure wherein only selected compounds have been tested and as to the types of cancer which can be treated; no data is provided to show effective treatment of liver cancer.

Claims 62-89 also stand rejected for allegedly being excessively broad in light of the disclosure wherein only selected compounds have been actually synthesized.

Applicants respectfully traverse, with respect to all claims rejected under 35 U.S.C. § 112, first paragraph and on all grounds for rejection. It is well known that to satisfy the enablement requirement under 35 U.S.C. § 112, first paragraph, Applicants' specification must teach one of skill in the art how to make and use the invention of the claims without an undue amount of experimentation. In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988). Applicants' specification need not teach and preferably omits what is well known in the art. Hybritech, Inc. v. Monoclonal Antibodies, 802 F.2d 1384, 231 USPQ 94 (Fed. Cir. 1986), cert. denied, 480 U.S. 947 (1987).

Applicants' specification sets forth working and prophetic examples that enable the full scope of the claims. See M.P.E.P § 608.01(p)(II) wherein it states that "[s]imulated or predicted test results and prophetical examples (paper examples) are permitted in patent applications."

Moreover, absent evidence to the contrary, Applicants' specification must be accepted by the Office as enabling for the full scope of the claims. See In re Marzocchi, 439 F.2d 220, 169 USPQ 369 (CCPA 1971); In re Brana, 51 F.3d 1560, 34 USPQ2d 1436 (Fed. Cir. 1995). The Office has not provided any evidence the above-referenced teachings, in combination with what was known to those skilled in the art, does not enable the full scope of the claims. Accordingly, the Office has not set forth a prima facie case and removal of the rejections under 35 U.S.C. § 112, first paragraph is respectfully requested.

35 U.S.C. § 112, Second Paragraph

Claims 56-59, 61-63, 65, 72 and 81-87 stand rejected under 35 U.S.C. §112, second paragraph, as indefinite for allegedly failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In claim 57 at line 1, the Office argued that term "characterized by" is indefinite because the meaning implied by the noted term is not judicially established. The Office also objected to the term "hyperproliferative cells" in claims 56, 58, 81-84, 86 and 87 for alleged failure to specify the particular disease being referred to. With respect to claim 58, the Office argued that the terms "sugar," "thio sugar," "carbocyclic," "acyclic analogs and derivatives of a sugar," "a thio-sugar or a carbocyclic," "derivatives," "analogs" are indefinite for allegedly failing to provide the structural details to the chemical species being referred to. The Office also noted that, the term "carbocyclic" is unnecessarily repeated and also is not further provided with an upper size limit; the terms "sugar" and "thiosugar" are compounds (-- sugar group --?); and, the terms "analogs" and "derivatives" are open ended (no metes and bounds or other limits on the definition).

The Office objected to claim 59 for allegedly being indefinite for failure to provide the structural details for the chemical species ("masked phosphoryl moiety" and "phosphoramidatyl moiety") being referred to. With respect to claim 62 at lines 10-11, the term "aromatic hydrocarbyl" is incomplete because it is not clear whether Applicants, are referring to an -- aromatic hydrocarbyl group -- or a compound. The Office applied the same criticism to the term "a heteroaromatic" argued that the terms both lack an upper size limit and therefore render the instant compound indefinite for failure to provide adequately defined metes and bounds. Also, the Office also noted that the term "heteroaromatic" is incompletely defined for failure to define the identity or limits on the proportion of the heteroatom or heteroatoms present.

The Office further noted that claims 63, 72 and 85 lack terminal punctuation.

Applicants respectfully traverse. Terminal punctuation has been added to claims 63, 72 and 85. Duplication of the term "carobcyclic" has been removed from claim 58.

Moreover, a claim is read in light of the specification. As noted in S3 Inc. v. nVidia Corp., 259 F.3d 1364, 59 U.S.P.Q.2d 1745 (Fed. Cir. 2001):

> "The purpose of claims is not to explain the technology or how it works, but to state the legal boundaries of the patent grant. A claim is not 'indefinite' simply because it is hard to understand when viewed without benefit of the specification."

Id. at 1369.

Applicants maintain that the claim language is definite when read in light of the specification. Additionally, it is well known that written description support is provided for a broader claim if the function and properties of what the applicant disclosed in light of the state of the art indicates to those skilled in the art that the invention is indeed broader. See, e.g., In re Smythe, 480 F.2d 1376, 178 U.S.P.Q. 279 (C.C.P.A. 1973). Similar to the facts at hand, the terms which the Office objects to are well known in the art, Applicants' prior response provided evidence that the objected to terms are well known to those of skill in the art. The Office has not provided any evidence that the terms are not well known or that one of skill in the art, upon reading the specification, would be unable to determine the metes and bounds of the invention. With respect to the Office's objection to the term "hyperproliferative", all claims now refer to methods to treat pathological hyperproliferative cells which excludes fetal cells, as pointed out by the Office. Additionally, page 668 of the THE AMERICAN HERITAGE COLLEGE DICTIONARY (1997) Houghton Mifflin Company, Boston, Mass., USA, copy attached, which defines the prefix "hyper-".

Accordingly, in view of the preceding amendments are remarks, reconsideration and withdrawal of the rejection under 35 U.S.C. § 112, first paragraph, is respectfully requested.

Double Patenting

Claims 56-61, 81-84 and 86-89 stand rejected under the judicially created doctrine of obviousness-type double patenting as allegedly unpatentable over claim 1-12 of then copending allowed Application No. 09/130,839, now U.S. Patent No. 6,495,553, issued December 17, 2002.

Claim 62-80 stand rejected under the judicially created doctrine of obviousness-type double patenting, as being unpatentable over claims 36-39 of U. S. Patent No. 6,339,151. Although the conflicting claims are not identical, they are not patentably distinct from each other because the method of treatment and the alleged active ingredients are directed to substantially overlapping subject matter.

Claims 56-84 and 86-89 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-7 of U. S. Patent No. 6,245,750. Although the conflicting claims are not identical, they are not patentably distinct from each other because the method of treatment and the alleged active ingredients are directed to substantially overlapping subject matter.

Claims 56-84 and 86-89 of this application allegedly conflict with claims of Application No. 09/130,839. 37 C.F.R. §1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP §822.

Applicants acknowledged but respectfully defer response to these grounds of rejection until allowable subject matter has been indicated by the Office in the subject application.

35 U.S.C. § 102(b)

Claims 56-84 and 86-89 stand rejected under 35 U.S.C. §102(b) as allegedly anticipated by Robugen '169 (PTO-1449 ref. B18). The Office referred Applicants to claims 1 and 3 of the noted reference wherein the compound claims and the method of treatment claims of the instant application are anticipated.

Applicants respectfully traverse and direct the Office's attention to the copy of the fully translated Robugen ('169) patent. The reference does not disclose phosphoryl or phosphoramidyl compounds, their use or screening, as now claimed by Applicants. Accordingly, the reference does not anticipate and removal of the rejection under 35 U.S.C. § 102(b) is respectfully requested.

Supplemental Information Disclosure Statement

PTO-FormA and a Supplemental Information Disclosure Statement is submitted to forward to the Office a complete translation of Robugen '169.

Applicants also request Examiner intialed PTO 1994 forms for the Information Disclosure Statement filed on February 26, 2002 and June 3, 2002 indicating that the references have been considered and made of record in the application file.

III. CONCLUSION

No additional fee is deemed necessary in connection with the filing of this Amendment and Response. However, if the Patent Office determines that an extension and/or other relief is required, Applicants petition for any required relief including extensions of time and authorize the Commissioner to charge the cost of such petitions and/or other fees due in connection with the filing of this document to **Deposit Account No. 50-2518**, referencing billing number **23896 - 7097**. However, the Commissioner is not authorized to charge the cost of the issue fee to the Deposit Account. Should a telephone advance prosecution of the subject application, the Examiner is invited to contact the undersigned at (650) 849-4950.

DATE: Feb. 20, 2003 Respectfully submitted,

By: Antoinette F. Konski

Antoinette F. Konski
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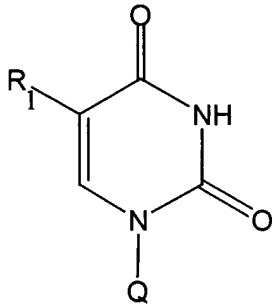
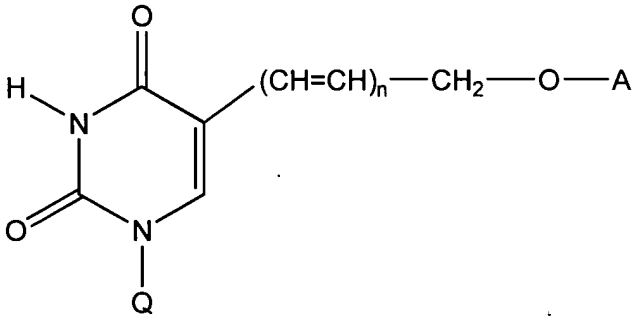
MARKED-UP VERSION SHOWING CHANGES MADE

In the claims:

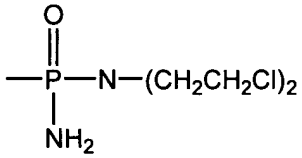
58. (Twice Amended) A method for inhibiting the proliferation of a pathological hyperproliferative cell comprising contacting the cell with an L- or D- isomer of the formula:



wherein R_1 is an electrophilic leaving group; or a compound of the formula:

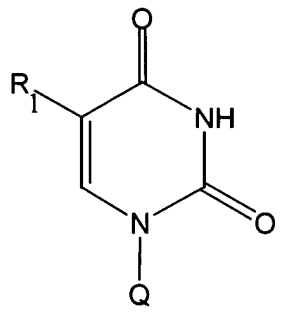


wherein n is an integer from 1 to 10; wherein A is a phosphoryl or phosphoramidatyl, or a compound of the formula:



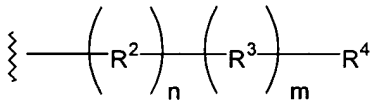
wherein Q is selected from the group consisting of a 5' substituted masked phosphoryl, a phosphoryl or phosphoramidatyl moiety selected from the group consisting of sugar; thio-sugar; carbocyclic; acyclic analogs and derivatives of a sugar, a thio-sugar or [a carbocyclic;] derivatives, analogs and pharmaceutically acceptable salts thereof.

62. (Twice Amended) A compound of the formula:



wherein:

R^1 is of the formula:



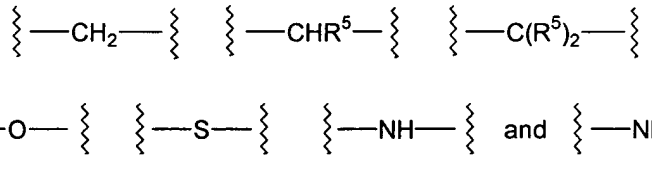
wherein n is from 1 to 10 and R^2 is selected from the group consisting of:

an unsaturated hydrocarbyl group;

an aromatic hydrocarbyl; and,

a heteroaromatic;

R^3 is selected from the group consisting of:

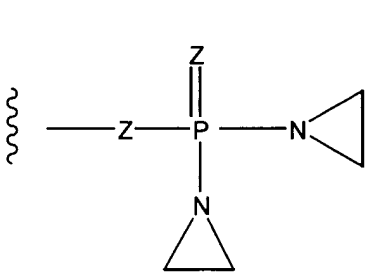


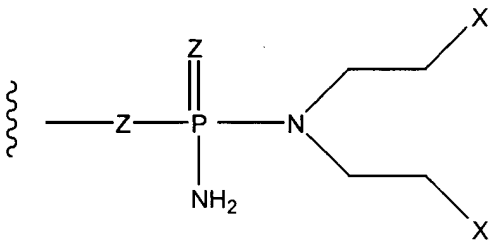
wherein R^5 may be the same or different and is independently a linear or branched alkyl group having from 1 to 10 carbon atoms, or a cycloalkyl group having from 3 to 10 carbon atoms;

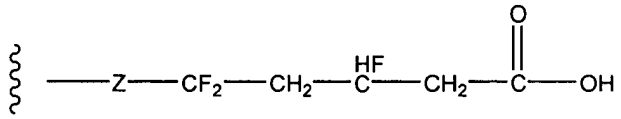
wherein n is an integer from 1 to 10;

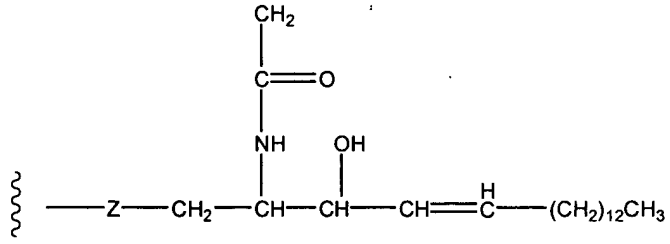
wherein m is 0 or 1;

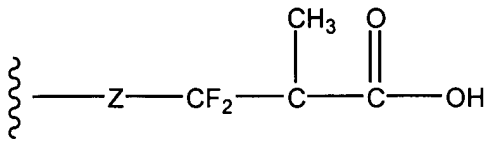
wherein R^4 is a toxophore selected from the group consisting of:

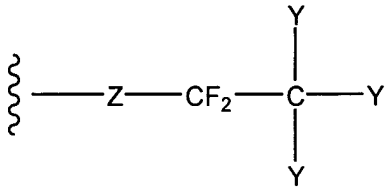


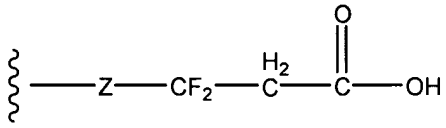




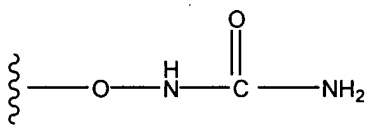








and

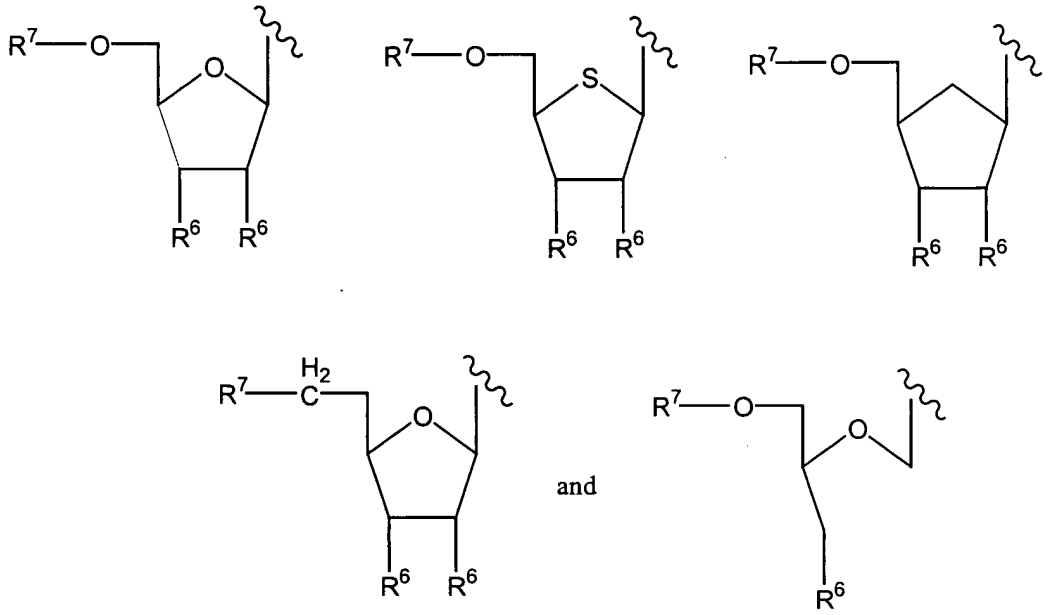


wherein X is -Cl, -Br, -I, or other potent leaving group, [with the proviso that when R^7 is -H, and M is zero, then R^4 is not a halogen or when m is zero and n is zero, then R^4 is not a halogen];

wherein Y is independently -H or -F;

wherein Z is independently -O- or -S-;

wherein Q is selected from the group consisting of:

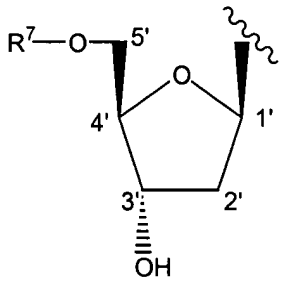


wherein R^6 is independently -H, -OH, $-OC(=O)CH_3$, or -O-Rg wherein Rg is a hydroxyl protecting group other than acetyl; and,

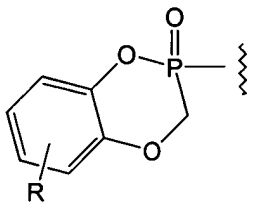
wherein R^7 is [hydrogen,] a masked phosphate group, or a phosphoramidatyl group;

and wherein said compound may be in any enantiomeric, diasteriomeric, or stereoisomeric form, consisting of a D-form, L-form, α-anomeric form, and β-anomeric form.

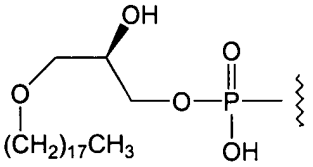
63. (Amended) A compound according to claim 62, wherein Q is:



72. (Amended) A compound of claim 62, wherein R^7 is selected from the group consisting of:



and



85. (Amended) A method for screening for a therapeutic agent, comprising contacting a target cell with a compound of claim 62, wherein R^4 is: